

USPT

US-CL-CURRENT: 424/401, 424/63 , 424/DIG.5 , 514/772.3 , 514/787

US-PAT-NO: 5505937

DOCUMENT-IDENTIFIER: US 5505937 A

TITLE: Cosmetic compositions with improved transfer resistance

DATE-ISSUED: April 9, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE
COUNTRY			
Castrogiovanni; Anthony	Belford	NJ	N/A
N/A			
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N/A			
Krog; Ann	Red Bank	NJ	N/A
N/A			
McCulley; Marion L.	South River	NJ	N/A
N/A			
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N/A			

US-CL-CURRENT: 424/64, 424/401 , 424/63 , 424/DIG.5 , 514/772.3 , 514/787

ABSTRACT:

A transfer resistant cosmetic composition comprising:

- a) 1-70% volatile solvent
- b) 0.1-15% silicone resin
- c) 10-45% wax
- d) 5-50% powder

e) 1-30% oil

33 Claims, 0 Drawing figures

Exemplary Claim Number: 1

DEPR:

The powder component of the invention can be generally defined as dry, particulate matter having a particle size of 0.02-50 microns. The particulate matter may be colored or non-colored (for example white). Suitable powders include bismuth oxychloride, titanated mica, fumed silica, spherical silica

beads, polymethylmethacrylate beads, micronized teflon, boron nitride, acrylate polymers, aluminum silicate, aluminum starch octenylsuccinate, bentonite, calcium silicate, cellulose, chalk, corn starch, distomaceous earth, fuller's earth, glyceryl starch, hectorite, hydrated silica, kaolin, magnesium aluminum silicate, magnesium carbonate, magnesium hydroxide, magnesium oxide, magnesium silicate, magnesium trisilicate, maltodextrin, montmorillonite, microcrystalline cellulose, rice starch, silica, talc, mica, titanium dioxide, zinc laurate, zinc myristate, zinc neodecanoate, zinc rosinate, zinc stearate, polyethylene, alumina, attapulgite, calcium carbonate, calcium silicate, dextran, kaolin, nylon, silica silylate, silk powder, serecite, soy flour, tin oxide, titanium hydroxide, trimagnesium phosphate, walnut shell powder, or mixtures thereof. The above mentioned powders may be surface treated with lecithin, amino acids, mineral oil, silicone oil, or various other agents either alone or in combination, which coat the powder surface and render the particles hydrophobic in nature.

DEPR:

The powder component also comprises various organic and inorganic pigments.

The organic pigments are generally various aromatic types including azo, indigoid, triphenylmethane, anthraquinone, and xanthine dyes which are designated as D&C and FD&C blues, browns, greens, oranges, reds, yellows, etc.

Inorganic pigments generally consist of insoluble metallic salts of certified color additives, referred to as the Lakes or iron oxides.

CCOR:

424/64

CCXR:

424/401

CCXR:

424/63

USPT

US-CL-CURRENT: 106/461,106/471 ,423/638 ,424/489 ,424/499  
,424/501 ,424/69  
,424/78.03

US-PAT-NO: 5171572

DOCUMENT-IDENTIFIER: US 5171572 A

TITLE: Barium sulfate and cosmetic compositions comprising same

DATE-ISSUED: December 15, 1992

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE
COUNTRY			
Suganuma; Hiroshi	Funabashi	N/A	N/A
JPX			
Takano; Satoshi	Funabashi	N/A	N/A
JPX			
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JPX			
Sakamoto; Ichiro	Wakayama	N/A	N/A
JPX			
Iwata; Minoru	Matsudo	N/A	N/A
JPX			
Kurotani; Nariyuki	Chiba	N/A	N/A
JPX			
Koizumi; Hideaki	Tokyo	N/A	N/A
JPX			
Itoh; Hiroshi	Koganei	N/A	N/A
JPX			
Maejima; Risa	Kasukabe	N/A	N/A
JPX			

US-CL-CURRENT: 424/401,106/461 ,106/471 ,423/638 ,424/489  
,424/499 ,424/501  
,424/69 ,424/78.03

ABSTRACT:

Barium sulfate having a specific crystal structure and optical characteristics is disclosed. The crystals have a plate-like structure of which the aspect ratio is 5-100 and the ratio of the square of the circumference of the plate and the area of the orthogonal projection plane is 20:1-150:1. In a preferred embodiment, a thin film of 25 .mu.m thickness with 20% by weight of the barium sulfate powder concentration has a scattering transmittance of 70% or greater and a total transmittance of 85%

or greater.

The cosmetic compositions to which the barium sulfate is incorporated exhibits excellent extendibility and adhesion to the skin and can effectively hide the spots or freckles on the skin. The cosmetic composition satisfies both the fine naked skin feeling and the skin covering effect, which have never been satisfied by conventional cosmetic compositions.

7 Claims, 4 Drawing figures

Exemplary Claim Number: 4

Number of Drawing Sheets: 2

DEPR:

Cosmetic powders other than barium sulfate (a) or (A) can be used together in

the cosmetic composition of the present invention. Especially preferable such

cosmetic powders other than barium sulfate (a) or (A) which can further promote

the feeling upon use, such as adherence and fitness to the skin, are (b)

spherical powder and (c) a powdery pigment consisting of polyvalent metal salt

of surface active agent. Preferable spherical powder (b) is that having an

average volumetric accumulative particle diameter of 0.1-2  $\mu\text{m}$ , and

especially preferably 0.1-1  $\mu\text{m}$ . Typical examples of such spherical powders

include various metal oxides such as spherical alumina, spherical silica,

spherical zirconia, spherical titanium oxide, and spherical zinc oxide; various

plastics such as polyester, polyethylene, polystyrene,

**methacrylate**

resin, **copolymer** of styrene and **acrylic** acid, polypropylene, polyvinyl

chloride, teflon, **acrylic** beads, polyolefin, and the like;

silica-containing

composite oxides; silicone resins; aluminum silicate; cellulose; and the like.

Among these, organic spherical powders are particularly preferable from the

aspect of promoting the feeling upon use.

DEPR:

Various components which are commonly used for cosmetics, other than components

(a), (A), (b), and (c), may optional be added to the cosmetic composition of the present invention in an amount not to damage the effect intended by the present invention. Such optional components include various oils, surfactants, powders other than powder components (a), (A), (b), and (c), water soluble polymers, preservatives, medicines, pigments, perfumes, UV absorbers, humectants, dyes, water, and the like. Examples of oils which can be used are liquid paraffin, petrolatum, paraffin wax, squalan, bees wax, carnauba wax, olive oil, lanoline, fatty acid, higher alcohol, synthetic ester oils obtained by reacting a fatty acid and a higher alcohol, and the like. Examples of surfactants include nonionic surface active agents such as polyoxyethylene alkyl ethers, polyoxyethylene fatty acid esters, polyoxyethylene sorbitan fatty acid esters, glycerol fatty acid esters, polyglycerol fatty acid esters, polyoxyethylene glycerol fatty acid esters, polyoxyethylene hydrogenated castor oil, polyoxyethylene sorbitol fatty acid esters, and the like; anionic surface active agents typified by fatty acid soaps such as sodium stearate, triethanolamine palmitate, and the like; cationic surface active agents; and amphoteric surface active agents. Given as examples of water soluble polymers are various commonly used water soluble polymers such as carboxymethyl cellulose, methyl cellulose, hydroxymethyl cellulose, polyvinyl alcohol, polyvinyl pyrrolidone, taragacanth gum, carrageenan, locust been gum, dextrin, dextrin fatty acid esters, carboxyvinyl polymer, xanthan gum, gelatin, sodium alginate, gum arabica, and the like. Examples of humectants are sorbitol, xylitol, glycerol, maltitol, propylene glycol, 1,3-butylene glycol, 1,4-butylene glycol, sodium pyrrolidone carboxylate, lactic acid, sodium lactate, polyethylene glycol, and the like. As examples of preservatives,

p-oxybenzoic acid alkyl esters, sodium benzoate, potassium sorbate, and the like are given. Various medical components which are commonly used in cosmetics, such as vitamins, Chinese medicines, analgesics, antiphlogistics, germicides, and the like, can be incorporated to the cosmetic composition of the present invention. Cosmetic powders other than the essential powder components (a), (A), (b), and (c) are, for example, inorganic powders such as talc, mica, kaolin, cerisite, potashmica, synthetic mica, phlogopite, lepidolite, biotite, lithia mica, vermiculite, magnesium carbonate, calcium carbonate, diatomaceous earth, magnesium silicate, calcium silicate, aluminum silicate, barium silicate, strontium silicate, metallic tungstenate, hydroxyapatite, hydrous silicic acid, anhydrous silicic acid, magnesium oxide, bentonite, zeolite, ceramic powders, aluminum hydroxide, and the like; organic powders such as nylon powder, polyethylene powder, polymethylbenzoguanamine powder, polymethyl methacrylate powder, polytetrafluoroethylene powder, microcrystalline cellulose powder, rice starch, lauroyl lysine, and the like; color pigments such as titanium oxide, zinc oxide, zirconium oxide, red iron oxide, iron titanate, iron hydroxide, loess, black iron oxide, carbon black, mango violet, cobalt violet, chromium oxide, chromium hydroxide, cobalt titanium, ultramarine blue, iron blue, and the like; pearling pigments such as titanium oxide-coated mica, titanium oxide-coated bismuth oxychloride, bismuth oxychloride, titanium oxide-coated talc, fish scales, colored titanium oxide-coated mica, and the like; and metallic powder pigments such as aluminum powder, stainless steel powder, copper powder, and the like. Given as examples of dyes are tar-derived dyestuffs such as Erythrosine (CI No. 45430), Phloxine B (CI No. 45410), Acid red (CI No. 45100), Lithol rubine B (CI

No. 15850),  
 Lithol rubine BCA (CI No. 15850), Lake red CBA (CI No. 15585),  
 Lithol red (CI  
 No. 15630), Deep maroon (CI No. 15880), Tetrabromofluorescein (CI  
 No. 45380),  
 Helidone pink CN (CI No. 73360), Fast acid magenta (CI No.  
 17200), Parmatone  
 red (CI No. 12085), Eosine YS (CI No. 45380), Violamine R (CI No.  
 45190), Oil  
 red XO (CI No. 12140), Tartrazine (CI No. 19140), Sunset yellow  
 FCF (CI No.  
 15985), Vranine (CI No. 45350), Quinoline yellow WS (CI No.  
 47005), Quinoline  
 yellow SS (CI No. 47000), Hanza yellow (CI No. 11680), Brilliant  
 blue FCF (CI  
 No. 42090), Indigo caramine (CI No. 73015), Indigo (CI No.  
 73000),  
**Phtalocyanine** blue (CI No. 74160), Fast green FCF (CI No. 42053),  
 Alizanine  
 cyanine green F (CI No. 61570), Pyranine conc (CI No. 59040),  
 Light green SF  
 yellowish (CI No. 42095), Dibromofluorescein (CI No. 45370),  
 Parmanent orange  
 (CI No. 12075), Parmanent orange G (CI No. 21110),  
 Diiodofluorescein (CI No.  
 45425A), Erythrosine yellowish NA (CI No. 45425), and the like;  
 organic **pigment**  
 powders such as carminic acid, laccaic acid, brazilin, carcumin,  
 crocin, and  
 the like; and lake **pigment** powders such as zirconia lake, barium  
 lake, aluminum  
 lake, and the like. UV absorbers which can be used include  
 p-aminobenzoic acid  
 compounds, anthranilic acid compounds, salicylic acid compounds,  
 cinnamic acid  
 compounds, benzophenone compounds, and the like.

DEPR:

When incorporated into a foundation composition, the powder  
 exhibited a better  
 feeling upon use and produced more transparent cosmetic films  
 than foundations  
 to which conventional body powders such as **mica and talc** are  
 incorporated.

DEPR:

When incorporated into a foundation composition, the powder  
 exhibited a better  
 feeling upon use and produced more transparent cosmetic films  
 than foundations



to which conventional body powders such as mica and talc are incorporated.

DEPR:

When incorporated into a foundation composition, the powder exhibited a better feeling upon use and produced more transparent cosmetic films than foundations to which conventional body powders such as mica and talc are incorporated.

DETL:

TABLE 2

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Average Total Scattered Manufacturer Pigments diameter (.mu.m)  
transmission  
transmission

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(%)

Shokubai Kasei Kogyo	Silica Microbead P-1500	*1	5.00	93.30	
24.40	Shokubai				
Kasei Kogyo	Silica Microbead P-400	*1	1.60	93.40	17.30
Tokuyama Soda					
Spherical Ceramics S-03	*1	0.39	92.20	7.50	Tokuyama Soda
Spherical Ceramics					
S-006	*1	0.52	93.00	13.15	Iwatani Sangyo E-8 *1 1.40 93.25
17.55	Horie Kako				
Sericite SP 2-20	90.60	41.20			Kakuhachi Fish Scale Eight Pearl
300S *2	2-20				
90.50	30.90	Asda Powder Manf.	<u>Talc</u>	JA46R 2-20	90.50 30.90
Yamaguchi	<u>Mica</u>				
<u>Mica</u> Y-2300	2-20	90.90	21.20		Sakai Chemical BARIFINE BF-20 *3
0.03	88.80				
28.30	Nihon Chemical	Precipitative Barium Sulfate ST	0.80		
66.60	85.40	Sakai			
Chemical	Special Barium Sulfate	4.20	87.60	36.70	Nihon Chemical
Precipitative Barium Sulfate D-2	1.10	79.90	79.40		Sakai
Chemical	Plate-like				
Barium Sulfate	5-10	91.10	43.80		Nihon Chemical Precipitative
Barium Sulfate					
ST/Si	1.15	88.10	64.30		Sumitomo Chemical Industry High-purity
Alumina AKS-G					
0.05	86.80	23.10			Sumitomo Chemical Industry High-purity Alumina
AKP-GM	0.05				
89.60	41.60				Sumitomo Chemical Industry High-purity Alumina
AKP-HP	0.45	69.80			
81.90					Sumitomo Chemical Industry High-purity Alumina CAH-GOO
5.00	91.90				
69.10					Sumitomo Chemical Industry Hardened-type Alumina BK-103
2.20	87.00				

68.10 Sumitomo Chemical Industry L.tau.-5 \*4 0.41 84.90 64.10  
 Showa Denko  
 HIGILITE H-43M \*5 0.73 87.40 63.80 Showa Denko HIGILITE H-32ST  
 \*5 2.50 90.30  
 58.00 Showa Denko HIGILITE H-42S \*5 0.90 88.90 69.60 Showa  
 Denko HIGILITE  
 H-43S \*5 0.75 87.50 64.80 Showa Denko Fine Particulate Low-Soda  
 Alumina  
 AL-43PCA 5.20 86.60 44.40 Wako Pure Chemical Special Grade  
 Zinc White 0.40  
 64.80 82.10 Sumitomo Cement Ultra-fine Zinc Oxide 0.04 71.35  
 70.65 Ishihara  
 Sangyo Taipeke A-100 \*6 0.15 20.70 85.35 Sumitomo Metal  
 Unidispersion  
 Titania \*6 0.50 54.50 83.30 Sumitomo Chemical Industry  
 Luxerene Silk H \*6  
 2-20 66.00 56.70 Toray Nylone Powder 5.00 91.70 57.20 Powder  
 prepared in  
 Example 1 5.3 88.0 72.50

\*1

Silica \*2 Sericite \*3 Barium sulfate \*4 LiAlO.sub.3 \*5  
 Aluminum hydroxide  
 \*6 TiO.sub.2

DETL:

	Component (%)
	(1) <u>Mica</u> Balance (2)
Powder prepared in	
Example 1 50 (3) <u>Talc</u> 2 (4) Titanium oxide 10 (5) Red <u>iron</u>	
<u>oxide</u> 0.8 (6)	
Yellow <u>iron oxide</u> 2.5 (7) Black <u>iron oxide</u> 0.1 (8) Liquid	
paraffin 8 (9)	
Bees wax 2 (10) Preservative q.s. (11) perfume small amount	
Total 100	

DETL:

	Component (%)
	(1) <u>Mica</u> Balance (2)
Commercial barium	
sulfate *1 50 (3) <u>Talc</u> 20 (4) Titanium oxide 10 (5) Red <u>iron</u>	
<u>oxide</u> 0.8 (6)	
Yellow <u>iron oxide</u> 2.5 (7) Black <u>iron oxide</u> 0.1 (8) Liquid	
paraffin 8 (9)	
Bees wax 2 (10) Preservative qs. (11) perfume small amount	
Total 100	

\*1: Platelike barium

sulfate H

(manufacture by Sakai Chemical Industry, Ltd., average diameter:  
6.3 .mu.m,  
irregular platelike crystals)

DETL:

	Component (%)
	(1) <u>Mica</u> Balance (2)
Nylon powder 10	
(3) <u>Talc</u> 20 (4) Titanium oxide 10 (5) Red <u>iron oxide</u> 0.8 (6)	
Yellow <u>iron oxide</u> 2.5 (7) Black <u>iron oxide</u> 0.1 (8) Liquid paraffin 8	
(9) Bees wax 2	
(10) Preservative q.s. (11) Perfume small amount Total 100	

DETL:

	Component (%)
	(1) <u>Mica</u> Balance (2)
Powder prepared in	
Example 1 50 (3) <u>Talc</u> 20 (4) Titanium oxide 0.5 (5) Red <u>iron oxide</u> 0.1 (6)	
Yellow <u>iron oxide</u> 0.1 (7) Black <u>iron oxide</u> 0.01 (8) Liquid paraffin 8 (9)	
Bees wax 2 (10) Preservative q.s. (11) perfume small amount Total 100	

DETL:

	Component (%)
	(1) <u>Mica</u> Balance (2)
Powder prepared in	
Example 1 50 (3) <u>Talc</u> 20 (4) Titanium oxide 0.5 (5) Red <u>iron oxide</u> 0.1 (6)	
Yellow <u>iron oxide</u> 0.1 (7) Black <u>iron oxide</u> 0.01 (8) Magnesium stearate 10	
(9) Preservative q.s. (10) Perfume small amount Total 100	

DETL:

	Component (%)
	(1) Stearic acid 5.5 (2)
Oleophylic	
monostearyl glycerol 2.5 (3) Cetostearyl alcohol 1 (4)	
Monolauryl	
propyleneglycol 3 (5) Squalan 7 (6) Olive oil 8 (7) Purified water Balance	
(8) Preservative q.s. (9) Triethanolamine 1.2 (10) Sorbit 3	
(11) Titanium oxide 10 (12) <u>Talc</u> 5 (13) Pigment q.s. (Black <u>iron oxide</u> , red	

iron oxide,

yellow iron oxide) (14) Powder prepared in Example 1 8 (15)  
Perfume Small  
amount Total 100

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DETL:

	Component (%)
	(1) <u>Mica</u> Balance (2)
Powder prepared in	
Example 2 50 (3) <u>Talc</u> 20 (4) Titanium oxide 4 (5) Zinc	
stearate 5 (6) Rice	
starch 5 (7) Coloring agent 3 (8) Liquid paraffin 3 (9)	
Preservative q.s.	
(10) Perfume Small amount Total 100	

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DETL:

	Component (%)
	(1) <u>Mica</u> Balance (2)
Powder prepared in	
Example 1 50 (3) <u>Talc</u> 5 (4) Titanium <u>mica</u> 5 (5) Zinc stearate	
5 (6) Zinc	
laurate 3 (7) Pigment 10 (Black <u>iron oxide</u> , red <u>iron oxide</u> ,	
yellow <u>iron</u>	
<u>oxide</u> ) (8) Liquid paraffin 7.5 (9) Preservative q.s. (10)	
Perfume Small	
amount Total 100	

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DETL:

	Component (%)
	(1) <u>Mica</u> Balance (2)
Powder prepared in	
Example 1 40 (3) Polymethylmethacrylate (PMMA) 10 with an	
average	
volumetric accumulative particle diameter of 0.4 .mu.m (4) <u>Talc</u>	
20 (5)	
Titanium oxide 10 (6) Red <u>iron oxide</u> 0.8 (7) Yellow <u>iron oxide</u>	
2.5 (8) Black	
<u>iron oxide</u> 0.1 (9) Liquid paraffin 8 (10) Bees wax 2 (11)	
Preservative q.s.	
(12) Perfume Small amount Total 100	

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DETL:

	Component (%)
	(1) <u>Mica</u> Balance (2)
Commercial	
plate-like 40 barium sulfate *1 (3) Polymethylmethacrylate	
(PMMA) 10 with	

an average volumetric accumulative particle diameter of 0.4 .mu.m (4) Talc 20  
 (5) Titanium oxide 10 (6) Red iron oxide 0.8 (7) Yellow iron oxide 2.5 (8) Black iron oxide 0.1 (9) Liquid paraffin 8 (10) Bees wax 2 (11) Preservative q.s. (12) Perfume Small amount Total 100

\*1 : Platelike barium

sulfate H

(manufacture by Sakai Chemical Industry, Ltd., average diameter: 6.3 .mu.m, irregular platelike crystals)

DETL:

Component (%)

(1) Mica Balance (2)

Powder prepared in

Example 1 40 (3) Nylon powder 10 (4) Talc 20 (5) Titanium oxide 10 (6) Red iron oxide 0.8 (7) Yellow iron oxide 2.5 (8) Black iron oxide 0.1 (9) Liquid paraffin 8 (10) Bees wax 2 (11) Preservative q.s. (12) Perfume small amount Total 100

DETL:

Component (%)

(1) Mica Balance (2)

Powder prepared in

Example 1 50 (3) Talc 20 (4) Titanium oxide 0.5 (5) Red iron oxide 0.8 (6) Yellow iron oxide 2.5 (7) Black iron oxide 0.1 (8) Liquid paraffin 8 (9) Bees wax 2 (10) Preservative q.s. (11) Perfume Small amount Total 100

DETL:

Component (%)

(1) Mica Balance (2)

Powder prepared in

Example 1 35 (3) Spherical silica with an average 15 volumetric accumulative particle diameter of 0.5 .mu.m (4) Talc 20 (5) Titanium oxide 0.5 (6) Red iron oxide 0.1 (7) Yellow iron oxide 0.1 (8) Black iron oxide 0.01 (9) Liquid paraffin 8 (10) Bees wax 2 (11) Preservative q.s. (12)

Perfume Small amount Total 100

DETL:

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	Component (%)
	(1) <u>Mica</u> Balance (2)

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Powder prepared in  
Example 1 30 (3) Spherical PMMA with an average 20 volumetric  
accumulative  
particle diameter of 0.8 .mu.m (4) Talc 20 (5) Titanium oxide  
0.5 (6) Red  
iron oxide 0.1 (7) Yellow iron oxide 0.1 (8) Black iron oxide  
0.01 (9)  
Magnesium stearate 10 (10) Preservative q.s. (11) Perfume Small  
amount Total  
100

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DETL:

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	Component (%)
	(1) <u>Mica</u> Balance (2)

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Powder prepared in  
Example 2 45 (3) Spherical PMMA with an average 5 volumetric  
accumulative  
particle diameter of 0.4 .mu.m (4) Talc 20 (5) Titanium oxide  
4 (6) Zinc  
stearate 5 (7) Rice starch 5 (8) Coloring agent 3 (9) Liquid  
paraffin 3  
(10) Preservative q.s. (11) Perfume Small amount Total 100

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DETL:

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	Component (%)
	(1) <u>Mica</u> Balance (2)

---

Powder prepared in  
Example 1 45 (3) Spherical silica-containing 5 composite  
oxide with an  
average volumetric accumulative particle diameter of 0.1 .mu.m  
(4) Talc 5  
(5) Titanium mica 5 (6) Zinc stearate 5 (7) Zinc laurate 3 (8)  
Pigment 10  
(Black iron oxide, red iron oxide, yellow iron oxide) (9)  
Liquid paraffin 7.5  
(10) Preservative q.s. (11) Perfume Small amount Total 100

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DETL:

TABLE 7

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Invention Product	Comparative Product	1	2	3	1	2	3
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Component (%) (1) Plate-like barium sulfate 40 40 40 40 -- --  
 prepared in  
 Example 1 (2) Zinc salt of sodium monocetyl phosphate 30 10 --  
 -- 30 30  
 prepared in Preparation Example 1 (3) Calcium N-lauroyltaurine  
 -- 20 -- --  
 -- -- prepared in Preparation Example 2 (4) Calcium  
 N-lauroyl-.beta.-alanine  
 -- -- 30 -- -- -- prepared in Preparation Example 3 (5)  
 Press-aid\* 10 10 10  
 15 10 10 (6) Sericite Balnce Balnce Balnce Balnce Balnce  
 Balnce (7)  
 Nylon powder 5 5 -- 10 5 5 (8) Titanium oxide 5 5 5 5 5 15 (9)  
Iron oxide 2  
 2 2 2 2 2 (10) Silicone oil 3 3 3 3 3 3 (11) Perfume 0.1 0.1  
 0.1 0.1 0.1  
 0.1 Total 100 100 100 100 100 100 Evaluation Item (1)  
 Softness upon use 5 5  
 5 1 5 5 (2) Fitness with the skin 5 5 5 3 5 5 (3)  
 Extendibility and  
 smoothness 5 4 4 3 5 5 (4) Freshness 4 5 4 3 4 4 (5)  
 Thicklessness 5 5 5 5  
 5 1 (6) Effect of hiding freckles and spots 5 5 5 5 1 5

\*Trademark, synthetic hydrocarbon wax, manufactured by Pressperse  
 Inc.

DETL:

	Component (%)
Example 1	(1) Powder prepared in
(2) Zinc salt of sodium monocetyl phosphate	20 prepared in
Preparation	
Example 1	(3) Amihope (Product of Ajinomoto Co.) 20 (4) <u>Talc</u>
Balance	(5)
Sericite 15	(6) Titanium oxide 2 (7) <u>Iron oxide</u> 1 (8) Squalan
2	(9)
Silicone oil 2	(10) Perfume 0.1 Total 100

DETL:

	Component (%)
Example 1	(1) Powder prepared in
(2) Calcium N-lauroyltaurine	Balance prepared in Preparation
Example 2	(3)
Titanium oxide 2	(4) <u>Iron oxide</u> 1 (5) Squalan 1 (6) Perfume
0.1	Total 100

DETL:

	Component (%)
Example 1 30	(1) Powder prepared in
(2) Calcium N-lauroyl-.beta.-alanine 30	prepared in Preparation
Example 3	
(3) Press-aid (Trademark, manufactured 20	by Pressperse Inc.)
(4) <u>Talc</u>	
Balance (5) Titanium oxide 5	(6) Coloring agent 15 Total 100

CCOR:

424/401

CCXR:

424/69



USPT

US-CL-CURRENT: 424/59,424/64 ,424/684 ,424/69 ,424/70.1

US-PAT-NO: 5989573

DOCUMENT-IDENTIFIER: US 5989573 A

TITLE: Method for improving the photochromism of a photochromic compound

DATE-ISSUED: November 23, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE
COUNTRY			
Remy; Christophe	75020 Paris	N/A	N/A
FRX			

US-CL-CURRENT: 424/401,424/59 ,424/64 ,424/684 ,424/69 ,424/70.1

ABSTRACT:

A method of improving the photochromism of a photochromic compound by including the photochromic compound in a composition with at least one component capable of scavenging at least one vacant state of an energy band, corresponding to an electron vacancy, of the photochromic compound. In particular, the component may be selected from components having at least one hydroxyl group, preferably a plurality of hydroxyl groups.  
35 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

BSPR:

synthetic polymers, for instance polyacrylic acids such as polyglyceryl (meth)acrylate polymers such as HISPAGEL or LUBRAGEL from the companies Hispano Quimica or Gardian, polyvinylpyrrolidone, polyvinyl alcohol, crosslinked polymers of acrylamide and of ammonium acrylate such as PAS 5161 or BOZEPOL C from Hoechst; acrylate/octylacrylamide copolymers such as DERMACRYL from National Starch; polyacrylamide-based polymers such as SEPIGEL 305 from Seppic, crosslinked polymers of acrylamide and of methacryloyloxyethyl-trimethylammonium chloride, such as SALCARE SC 92 from Allied Colloids,

BSPR:

The polymer may be selected from nitrocellulose, cellulose acetobutyrate, polyvinyl butyrals, alkyd resins, polyesters, acrylics, vinyls and/or polyurethanes.

BSPR:

Mention may, in particular, be made of the copolymers of (meth)acrylic acid and of at least one ester monomer of linear, branched or cyclic (meth)acrylic acid and/or of at least one amide monomer of linear, branched or cyclic, mono- or disubstituted (meth)acrylic acid; (meth)acrylic acid/tert-butyl (meth)acrylate and/or isobutyl (meth)acrylate/C.sub.1 -C.sub.4 alkyl (meth)acrylate copolymers; (meth)acrylic acid/ethyl acrylate/methyl methacrylate terpolymers and tetrapolymers; methyl methacrylate/butyl or ethyl acrylate/hydroxyethyl or 2-hydroxypropyl acrylate or methacrylate/(meth)acrylic acid tetrapolymers; copolymers of acrylic acid and of C.sub.1 -C.sub.4 alkyl methacrylate; terpolymers of vinylpyrrolidone, of acrylic acid and of C.sub.1-20 alkyl methacrylate; amphoteric copolymers; vinyl esters of branched acids; vinyl esters of benzoic acid; copolymers of (meth)acrylic acid and of at least one olefinic monomer; copolymers of vinyl monoacid and/or of allylic monoacid.

BSPR:

The pigments may be present in the composition in an amount preferably ranging from 0 to 15% by weight of the final composition, and more preferably from 8 to 10% by weight. They may be white or colored, inorganic and/or organic, and of customary or nanometric size. Mention may be made of titanium, zirconium or cerium dioxides, as well as zinc oxide, iron oxide or chromium oxide, ferric blue, chromium hydrate, carbon black, ultramarines (aluminosilicate

polysulphides), manganese pyrophosphate and certain metal powders such as those of silver or of aluminum, and carbon black. Mention may also be made of the lakes commonly used to give a make-up effect to the lips and the skin, these lakes being salts of calcium, barium, aluminum or zirconium, or acidic colorants such as haloacid, azo, anthraquinone, etc. dyes.

USPT

US-CL-CURRENT: 106/31.03,514/828

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TITLE: Natural look cosmetic compositions

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INVENTOR-INFORMATION:

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US-CL-CURRENT: 424/401,106/31.03 ,514/828

ABSTRACT:

The invention relates to a composition for topical application to the skin comprising (a) silica beads comprising an inner core of silica, a middle layer of metal oxide, and an outer layer of silica; (b) at least one interference pigment; and optionally (c) at least one non-interference pigment, in a cosmetically or pharmaceutically acceptable vehicle. The compositions of the invention confer a natural appearance to the skin, also reducing the appearance of flaws or defects in the skin without conferring an opaque or made-up appearance.

36 Claims, 0 Drawing figures

Exemplary Claim Number: 1

BSPR:

Organic pigments, however, can also be used in the compositions of the invention; these include natural colorants and synthetic monomeric and polymeric colorants. Exemplary are phthalocyanine blue and green pigment, diarylide yellow and orange pigments, and azo-type red and yellow pigments such as toluidine red, litho red, naphthol red and brown pigments. Also useful are

lakes, which are pigments formed by the precipitation and absorption of organic dyes on an insoluble base, such as alumina, barium, or calcium hydrates.

Particularly preferred lakes are primary FD&C or D&C Lakes and blends thereof.

Stains, such as bromo dyes and fluorescein dyes can also be employed. The

amount and type of pigment used will vary depending upon the nature of the

final product and the desired intensity of color; generally, however, the

amount of non-interference pigment will be about 1 to about 20% by weight of

the total composition. It will be apparent to those skilled in the art that

those compositions intended to confer a greater level of coverage to the skin

will contain more pigment than those intended to enhance but not necessarily

cover the skin. In addition, microfine particulate pigments can be used at

somewhat higher levels than those of normal particle size without significantly

increasing the level of opacity of the composition on the skin.

#### BSPR:

An optional component of the formulation are spherical powders which can aid in

reducing or softening any metallic look that may result from one of the other

components, particularly the interference pigment. Such materials are known in

the cosmetic industry for their light-scattering properties on the skin.

Powders of this type may include, but are not limited to, powders comprising (with examples of commercially available sources)

calcium aluminum

borosilicate (Luxsil.TM.), PMMA (Microsphere M-100), polyethylene (polyethylene

Cl 2080), methyl methacrylate crosspolymer (Covabeads LH85),

nylon-12 (Orgasol

2002 O Nat Cos C), or ethylene/acrylic acid copolymer (Flobeads EA209). These

powders, when used, are present in an amount of from about 0.001% to about 20%,

preferably about 1% to about 10%, by weight of the total composition.

BSPR:

The combined components can be used in any type of skin treatment or makeup product. Skin treatment products, such as lip products, acne treatments, moisturizers, anti-aging products, lifting treatments, cellulite treatments and eye treatments, will ordinarily contain only the multilayered silica beads and the interference pigments; however, makeup products will typically contain all three components. The makeup products of the invention include, but are not limited to, foundations, blushes, pressed or loose powders, concealers, bronzers, eyeshadows, eyeliners, lipsticks, and lipglosses. The products of the invention can take any form which is typical of cosmetic products, for example, hot pour formulations, water-in-oil emulsions, oil-in-water emulsions, gels, sticks, sprays, anhydrous formulations, and pressed or loose powders. There is no limitation on the type of vehicle that can be employed. In particular, the preferred identity of the vehicle will be largely controlled by the type of product into which the components are to be incorporated. For a liquid foundation, for example, a water-in-oil emulsion is preferred for aesthetic reasons, and although the oil portion of the vehicle can be any which is typically used for this purpose, it is preferred that the oil component comprise a silicone oil, either volatile or non-volatile. On the other hand, in a hot-pour formulation, the components are preferably dispersed in a hydrocarbon vehicle, such as isododecane or polyisobutene. In a preferred embodiment, the effect of the combined components are seen to best advantage in a hot pour product, such as a solid foundation or cheek color. In both cases, however, it is preferred that each of the pigments be hydrophobically coated, so as to facilitate formulation.

CLPR:

11. The composition of claim 10 in which the organic pigment is selected from the group consisting of phthalocyanine blue and green pigment, diarylide yellow and orange pigments, azo red and yellow pigments, lakes, fluorescein dyes, and bromo dyes.

CCOR:

424/401